Development of the Water and Pesticides Information Center (WaterPIC) Map Server

Public Comments

No public comments were received for this proposal.

Technical Synthesis Panel Review

Proposal Title

#0186: Development of the Water and Pesticides Information Center (WaterPIC) Map Server

Final Panel Rating
adequate

Technical Synthesis Panel (Primary) Review

TSP Primary Reviewer's Evaluation Summary And Rating:

The application created by this project would be valuable, and the technical aspects of the project are very feasible for this group of investigators (though additional GIS expertise may be beneficial). But it is not clear that the project's value is sufficient to warrant its price tag. First: The proposal authors see the application as being used by local stakeholder agencies such as watershed groups, by regulators such as Water Board scientists, and by other scientists. But various factors are expected to limit the use of the WaterPIC Map Server. Outreach and training on the application's use is limited, the platform will have limited flexibility, downloading of maps over the web will be slow, and scientist interested in using the data may be more likely to go back to the original data sources or collect their own data. It is also not clear how user-friendly the endproduct will be. Secondly, while the underlying datasets will be updated semi-annually during the project, the application would quickly become obsolete without regular updates after the project's end. From this viewpoint it would make more sense to have a state agency (Dept. Water Resources, California Data Exchange Center, Department of Pesticide Regulation) take on such a project. Also,this project does not gather new information. It gathers and organizes information, making it more convenient for others to use it.

Additional Comments:

The external reviews were rather mixed. While the goals and objectives were clear, one external reviewer felt that they were overstated because the proposal authors have little control over the use of the website such that the endproduct may not be used heavily. Justification was considered excellent by one external reviewer, but another felt it to be unlikely that researchers would use the map server heavily (they'd be more likely to turn to the original datasources. The approach was generally considered valid. One reviewer commented that the choice of the internet map server (such as ArcIMS) may not be optimal due to its limited flexibility and because it is slow even over high−speed lines. Feasibility was considered to be fair−good. Existing GIS data vary in quality, content, and extent. The authors indicate problems accessing current data, and it is unclear that this could be overcome when putting together the dataset and map server. Marketting may be insufficient to for the map server to reach a wide audience. While the product is expected to be useful, it may be useful to only a small audience. Various stakeholders may find the using the map server to be more cumbersome than the use of locally−based GIS. Map servers may restrict the end−user too much because of system−defined limitations. While the authors have proven track−records, additional GIS and internet experience may be needed. While the budget was considered to be realistic, it may be possible to accomplish the same for much less money by producing geographic themes with existing WaterPIC information (though it would require GIS capabilities by end−users). The project is technically feasible, but external review felt that the user community may be fairly small compared to the cost and magnitude of the project. Overall benefits may thus be fairly limited.

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stakeholder agencies such as watershed groups, by regulators such as Water Board scientists, and by other scientists. But various factors are expected to limit the use of the WaterPIC Map Server. Outreach and training on the application's use is limited, the platform will have limited flexibility, downloading of maps over the web will be slow, and scientist interested in using the data may be more likely to go back to the original data sources or collect their own data. It is also not clear how user−friendly the endproduct will be. Secondly, while the underlying datasets will be updated semi−annually during the project, the application would quickly become obsolete without regular updates after the project's end. From this viewpoint it would make more sense to have a state agency (Dept. Water Resources, California Data Exchange Center, Department of Pesticide Regulation) take on such a project. Also,this project does not gather new information. It gathers and organizes information, making it more convenient for others to use it.

Technical Synthesis Panel (Discussion) Review

TSP Observations, Findings And Recommendations:

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The primary reviewer ranked this proposal as adequate. The panel felt the goals of the proposal were overstated and the utility for the product may not be as high as stated. There were no testable hypotheses proposed; the project gathers and organizes information, rather than providing new scientific information. The proposed database could potentially increase data access efficiency, but the panel felt that improving existing databases would probably be a more effective approach to management of this information.

Final Ranking: Adequate.

Technical Review #1

proposal title: Development of the Water and Pesticides Information Center (WaterPIC) Map Server

Review Form

Goals

Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the idea timely and important?

Comments	**This is an extraordinarily important and timely topic. The authors have cogently laid out a detailed approach that indicates successful experience with project management in the past.** **It was not clear to me, however, what the geographic area of interest was for this project -- the entire State of California, or some subdivision?**
Rating	**excellent**

Justification

Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full−scale implementation project justified?

Comments	**The authors have done a fine job in this area. The conceptual model is well stated, and the "spiral" approach for implementation should add to the project's successful outcome.**
Rating	**excellent**

Approach

Is the approach well designed and appropriate for meeting the objectives of the project? Is the approach feasible? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology, or approaches? Will the information ultimately be useful to decision makers?

Comments	**The project's approach is described in detail, and is quite feasible. The products supplied by this project will be of great value to people and organizations at many levels within California.** **I might suggest that the authors consider adding additional advertising to the general public as part of their outreach and marketing strategies for their product. I imagine that there are many individuals, schools, and groups outside the scientific and political arenas that would find this information very useful.**
Rating	**very good**

Feasibility

Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives and within the grasp of authors?

Comments	**I might caution about the reliance on existing GIS data layers for the project's success. The quality, content, and extent of available GIS data varies considerably. The authors do not appear to have discussed this issue adequately in the proposal.**
Rating	**good**

Monitoring

If applicable, is monitoring appropriately designed (pre−post comparisons; treatment−control comparisons)? Are there plans to interpret monitoring data or otherwise develop information?

Comments	**The project builds upon work that has been, and continues to be, successful. Additionally, project status points have been defined that will allow for mid-course correction following several prototype applications.**
Rating	**excellent**

Products

Are products of value likely from the project? Are contributions to larger data management systems relevant and considered? Are interpretive (or interpretable) outcomes likely from the project?

Comments	**This project's output will be very valuable for people and organizations at many levels, both within and outside CALFED.**
Rating	**excellent**

Additional Comments

Comments	**I'm excited about the possibilities that this project. I encourage the authors to consider adding other user-selected areas (such as political and administrative boundaries) to the possible selections. For example, it would be useful to know about pesticides across geographic areas other than watersheds: counties, legislative districts, and federal/state/private ownership patterns come to mind. This is where the power of GIS can prove useful.**

Capabilities

What is the track record of authors in terms of past performance? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

Comments	**The authors have proven track records within their specialty areas. However, I would like to see additional GIS expertise added to the**

	project team. Since this project is all about adding GIS functionality to an existing application, I don't see sufficient GIS expertise, let alone GIS-Internet expertise, listed among the team's CV's.
Rating	**good**

Budget

Is the budget reasonable and adequate for the work proposed?

Comments	**The budget is quite adequate and reasonable for a project of this scope.**
Rating	**excellent**

Overall

Provide a brief explanation of your summary rating.

Comments	**This project has an above-average potential for success, and if successful will provide very pertinent and useful information.**
Rating	**excellent**

Technical Review #2

proposal title: Development of the Water and Pesticides Information Center (WaterPIC) Map Server

Review Form

Goals

Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the idea timely and important?

Comments	**I apologize up front if my comments are overly harsh, but I feel that the goals and objectives are overstated. The project sponsor believes they will accomplish more that I do. This is a great concept and I wish it would work because special and temporal relationships and analyses are very important. But the goals can't be met because the sponsor can't control many of the factors that will determine the success of this project. They can make the information available to the best of their ability, but cannot control who will use the data or if data will be used towards a productive end by targeted users outside their organization. Their choice of an internet map server (such as ArcIMS) to integrate the information creates a platform that has limited flexibility and is slow even over high−speed lines. A product that is limited in capabilities or is cumbersome to use will not end up in wide circulation.**
Rating	**fair**

Justification

Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full−scale implementation project justified?

Comments	**Project justification was given by stating it will allow researchers to quickly and inexpensively analyze a study area. I don't believe researchers will use it as stated. They may make initial inquiries to get a feel for what information may exist, but they will want to collect their own data or go to the original source for the raw information. Generally, they will have their own sampling plans that probably will not be met by another agency. The project was also justified by stating that stakeholders (producers) would use it to modify their practices. If the product is not user friendly and takes too much time to learn and use, producers will not use it.**
Rating	**fair**

Approach

Is the approach well designed and appropriate for meeting the objectives of the project? Is the approach feasible? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology, or approaches? Will the information ultimately be useful to decision makers?

Comments	**The approach has been well thought out and creation of the Map Server is feasible. However, I do not see any direct end-results from this project that change knowledge base or understanding. This will only occur if the product is used by other entities. This project merely gathers and organizes information into one convenient place so that others can accomplish this if they choose to use the product.**
Rating	**good**

Feasibility

Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives and within the grasp of authors?

Comments	

	It is a great concept to have all this information together, but researchers should be able to gather the information from the original sources and would probably prefer to do so in order to understand any idiosyncrasies associated with the data. Data that are combined on this site may not be comparable, thus not appropriate to view together. Under Task 5 it was stated that Rogers had difficulty accessing and compiling data for two parameters. This points to the importance of understanding why the data were collected. If he had such difficulty compiling a limited dataset compared to all the data this project will deal with, why is it assumed that this project will be able to overcome these obstacles? Task 6 seeks to evaluate the question of applicability by stakeholders and regulators and states that the exact nature of an experimental application will be dependent on priorities. This statement reveals that the sponsor does not control the direct success of this project. Only end−users will decide whether it has value or not. Task 8 proposes an outreach program where three meeting are to be set at the sponsor's schedule. The limited exposure provided by these three meetings will not "market" the product to producers. A much more aggressive promotion scheme will be needed to get potential users interested.
Rating	**fair**

Monitoring

If applicable, is monitoring appropriately designed (pre−post comparisons; treatment−control comparisons)? Are there plans to interpret monitoring data or otherwise develop information?

Comments	**Review under this category is not applicable for the most part since the project compiles information from other sources. However, one comment should be made regarding appropriate data. Task 2 states that PANNA will make efforts to acquire and pass onto users any available QC information. QC information should be required! Unless this information is available, data**

	should not be posted to the site. Doing so runs the risk of allowing misuse (unintentional or intentional) of the data.
Rating	**not applicable**

Products

Are products of value likely from the project? Are contributions to larger data management systems relevant and considered? Are interpretive (or interpretable) outcomes likely from the project?

Comments	**I am sure that a limited audience will apply the product; I just don't believe it will have as broad an application as envisioned by the sponsor. For those that do use it, they will likely provide interpretive outcomes. This project attempts to be the "one large data management system", thus its contributions are relevant. However, I do not believe average producers (stakeholders) will use it to modify their practices. Regulators or conservation agencies could use the map server, but they might find an internet map server to be more work than using a locally-based GIS with themes developed from available geographic information and the WaterPIC information developed in the sponsor's previous project. Several sources and types of data are listed in the narrative, all of which are presumably available from the original sources. Other than providing locational information with the original WaterPIC dataset, this project only provides a convenient geographic integration for the original WaterPIC information. Producers could realize the convenience of this site, but as stated above, I don't think they will bother to use it unless forced to.**
Rating	**fair**

Additional Comments

Comments	

	I personally do not like internet map servers. They restrict the end-user to system-defined limitations (projections, etc.) and are not flexible. EPA's "Surf your Watershed" is an example of my concerns. It really has no utility other than public relations. I would prefer to see this project develop GIS themes that would be made available for local application with software such as ArcView or ArcInfo. Development of such themes to be served out for local GIS application would be much less expensive than this project. The real results of this project involve a leap of faith. I would like to believe that the sponsors will accomplish all they intend to, but much of the success of this project will be out of their hands. It will rely on end-users taking the time to learn and work with the product. I am skeptical and have to believe that producer's economics will work against this. Producers don't have the time to learn the capabilities and play with scenarios. Researchers will have their own preconceived, predetermined data needs that this product may or may not fulfill. It may be just as easy for researchers to go to original sources of data than to use this product.

Capabilities

What is the track record of authors in terms of past performance? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

Comments	**My review of the provided CVs gives me confidence in the technical abilities of the team to develop the Map Server. However, much of the success of the project (acceptance by end-users) is beyond their control.**
Rating	**very good**

Budget

Is the budget reasonable and adequate for the work proposed?

Comments	**I was given the impression in reading the proposal that the GIS side really includes funding and maintenance for some of the already funded (by EPA) activities (WaterPIC database maintenance). The budget is realistic for the creation of an internet map server with all the information that will be associated with it. However, the same end can be accomplished for much less money by producing geographic themes (hydrography, political boundaries, roads, soils, etc.) for use with existing WaterPIC information. Of course, this assumes that end-users will have GIS capabilities and that producers (stakeholders) are not likely to use the information themselves.**
Rating	**good**

Overall

Provide a brief explanation of your summary rating.

Comments	**I am certain that the technical aspects of this project can be accomplished and that the information that is brought together can be served out to a user community as stated. Thus, I have no concerns over its technical aspects. However, I am concerned that the user community will be small compared to the magnitude and cost of this project. I believe the overall benefits resulting from end-use of the information are over stated. From a researcher's viewpoint, the WaterPIC Map Server will be too simplistic and have limited application. I would prefer thematic data layers to construct my own GIS views. From a producer's standpoint, an Internet map server will be useable, but not something that will sell itself. Only three sessions for training and marketing will not get it into wide use. Also, as a producer, I don't know if I would want to take the time to learn the product, then take even more time to apply it to my own**

	situation. Time is money and it would have to show me where I would make money by using it.
Rating	**fair**